

sponsibility under which they groaned, by extending the privileges of its local examinations to the feminine portion of the community. Previously to that date, every schoolmistress, with no past or university training for herself, and no future of external tests for her pupils as guide, had done that which seemed right in her own eyes; and seeing that her chances of enlightenment had been in general the least possible, one can only wonder that matters were not much worse than they were. Of desire for the best, there must, however, have been at that time a goodly quantity; for an address, signed by more than eight hundred teachers, was presented to the university, praying for the extension of the examinations, and increasing numbers and steady improvement have marked the examination career of the girls ever since. In the early years, as every one knows, the number and kind of failures in arithmetic were lamentable; but of late the school that has had the smallest percentage of failures in that subject is a girl's school. The past twelve years have indeed been years of rapid advance in the education of girls, and in the education of the public mind to appreciation of a nobler ideal concerning it, as well as of constant struggle on the part of Englishwomen for certain long-withheld and much-needed educational and professional facilities.

But in 1876 the College of Physicians in Dublin declared itself ready to grant medical diplomas to women, and during the past year five ladies, three of whom had fought hard (how hard is well known) at Edinburgh, availed themselves of this sudden solution of their difficulties. Truly it seemed that the tide had turned; for, early in 1877 the Senate of the London University passed a resolution in favor of admitting women to its medical degrees, and appointed a committee to carry the resolution into effect. Soon after, however, a petition, signed by two hundred and fifty medical graduates, was presented to the Senate, praying it to rescind that resolution; and on the 7th of May a stormy meeting of Convocation issued in a resolution, carried by a majority of thirteen, declaring it advisable that admission of women to the medical degrees should be postponed till the question of admitting them to degrees in general should first be settled. Many hearts, perhaps with an undue appreciation of the powers of Convocation, were saddened by this vote, implying, as every one knew it to imply, a vigorous attempt at indefinite postponement of the immediately possible reform,

From The Westminster Review.

THE EDUCATION OF GIRLS: THEIR ADMISSIBILITY TO UNIVERSITIES.

ONLY twelve years ago the University of Cambridge consented to take the first step towards delivering the girls' schools of England from the sad state of irre-

by adding to its opponents the hostile forces of other professions.

The Senate hearkened to Convocation's voice—not with the effect intended, but contrariwise. At the meeting of the 20th of June, the Senate resolved to adhere to its decision of opening the medical degrees to women, and further to apply to Parliament for a new charter, enabling it to open the other degrees also. Thus the general question was settled, so far as the university alone can settle it; and we hope there will now be only the necessary delays in at last making university degrees attainable to women in England.

Tardily, indeed, has the concession been granted. The men and women of a hundred years hence will perhaps read its history, and not be struck with the prominence in it of the boasted national instinct of fair play; for in England, last of all civilized countries, has this instinct triumphed over use and wont; the freest of European lands has been the last to accord, not only equality of educational privileges, but even liberty of professional choice in any form to its women—surely a strange anomaly, not even matched by the parallel anomaly that in Germany, where the importance of education and the equal right of every citizen to it is most clearly recognized, the separation between boys' and girls' education is slowest in being bridged. Arguing with eyes shut, one would say: in England they will not make mighty efforts about educating girls equally with boys, but they will cede to every Englishwoman her British right of doing what she likes; whereas in Germany they will raise and widen the education of German girls as much as any one can desire, but they will take care to give German women no chance of stepping out of their sphere into masculine professions. But England can now boast a goodly list of girls' schools where Latin, mathematics, and natural science are taught, besides associations for the extension of university teaching, and a ladies' college in all details of curriculum and examinations a veritable equivalent for those of Cambridge, and yet no amount of equivalent examinations gains a degree; while Germany offers a university career to women in Leipzig and elsewhere, but has no means of preparation for it—the higher girls' schools being inadequate on account of their limited range of study, and not comparable at all to the *Gymnasien* of the boys, though efforts to obtain the equivalent of these have already begun.

The doctrine of the equality and similar-

ity of education for boys and girls was first preached and acted upon in America; but even there it is scarcely half a century old. Before the year 1826 girls were only allowed to attend the schools of Boston, Massachusetts, during the summer months, when there were not boys enough to fill them. In that year an attempt was made to establish a high school for girls on the plan of those already existing for boys. Two hundred and eighty-six candidates presented themselves for admission, while the applications for the boys' high school had never exceeded ninety. This eagerness for knowledge, so unbecoming in girls, was too much for the good people of Boston to endure unmoved. In the words of the school committee of 1854, the school had an "alarming success;" and accordingly, after eighteen months' trial, it was discontinued. After this, however, the girls were allowed to remain in the grammar schools throughout the year.

So America has had its days of women's education panic. But in the Western States better counsels soon obtained. Oberlin College was founded in 1833, offering equal advantages of education to both sexes; and both sexes have availed themselves of it; for up to the year 1873 it had graduated 579 men and 620 women, exclusive of 426 men in the Theological Faculty. Soon after, in 1837, Mount Holyoke Seminary, for girls only, was founded; Antioch, for boys and girls, followed in 1852; and Vassar, for girls only, in 1865. These are a few out of the many institutions which are now scattered far and wide through the United States, and act on the principle, still so much contested, that the similarity of mental development in average individuals of both sexes is so much greater than the difference (if there be any), that, for purposes of education, this presumed difference may be considered as evanescent. Michigan University opened its gates in 1870; Boston, founded in 1871–72, has admitted women from the beginning; and Cornell University yielded to the current in 1875. Harvard and Yale, the two great American universities, still resist all demands and entreaties, and perhaps this is the bitterest grievance of American women, though even it has been slightly alleviated, since some years ago, in 1873, Harvard consented to grant local examinations for girls. But be Harvard and Yale as unyielding as they may, when we turn from the story of the Boston high school in 1826, and observe that in 1867 there were 22 colleges in the States open to men and women

alike, and in 1873, by the report of the United States' commissioner of education, 97, while Boston itself boasts a university containing, according to its annual report of 1876, 483 young men and 144 young women, the increase per cent. during the previous year having been 28 for the former and 41 for the latter, we are not inclined to think very badly either of the liberality of American men or the energy of American women.

And it does not seem that the education of American men has suffered from this liberality. "If any have cherished a fear that the admission of women would tend to reduce the standard of work in the university," says the president of Michigan University in 1873, "their attention may be drawn to the fact that during the last three years we have been steadily increasing the requirements for admission and broadening the range of studies;" and again, in 1872: "Their presence has not called for the enactment of a single new law, or for the slightest change in our methods of government or mode of work." Similar testimony reaches us from the other universities. The Boston report, before referred to, states that in several cases the presence of the women has aided in elevating the standard of scholarship, and that at all times their influence has promoted order, studiousness, and a true social culture.

Side by side with this powerful educational movement, the sister movement of opening up the professions to women has been also making steady way. The attainability of university degrees, and the instruction leading up to them, involves this indeed, as giving the efficiency and the guarantee of it which are the main requirements for entering a profession; but quite independently of the general educational question, the medical education of women early became in America, as elsewhere, a matter of supreme importance. On the first Wednesday in November, 1848, the first medical college for women in the world was opened at Boston. This second shock fell hard on public opinion in that city; but twelve women were found brave enough to face the storm and form the first class of lady medical students. This was the small beginning of a movement that has since spread so rapidly over America and Europe. In 1850 the Female Medical College in Philadelphia was opened, one in New York in 1863, and another in 1868. As a consequence, we find that the census of 1870 reports 525 lady doctors in the States, whereas in

1848 there was not one. Many of these are professors in the medical colleges, or hold public appointments; and their success in private practice leaves no doubt as to the existence of a felt want which they are fitted to supply. The purely medical male institutions have slowly enough recognized their professional sisters. The Pennsylvania College of Dental Surgery opened its doors to women only in 1873, the opportunity being speedily turned to account by two ladies, the first of whom received her diploma in June 1874. The first woman admitted to a medical society in New York was Dr. Mary Green, physician to the Women's Prison Association in that city, who was elected a member of the New York Medico-Legal Society in 1871.

All along, be it remembered, women were studying medicine in the universities open to them, not separately either, but in mixed classes. In reference to this we may again quote from the Boston University report: "From the first there has been no difficulty or embarrassment on account of co-education. . . . No lecture or operation has been restricted to either class, and the presence of the two sexes has been a wholesome restraint upon all." It is curious to compare this statement from those who have had experience of medical co-education with the woful prophecies of those who have had none. Usually the facts of the past are more believable than the predictions of the future.

Not till a later date did American women turn their attention to law as a profession. But inevitably the legal faculty in due time attracted its share of fair students at the universities; and in one state after another lady candidates for admission to practice in the courts made their appearance. Chicago, we believe, had the honor of being the first possessor of a woman lawyer. In 1870 there were five in the States, and since then several reports of other cases have reached our ears in England. Two ladies were admitted to practice at Utah, with much complimenting, in 1873. During the same year the first lady lawyer in Iowa was sworn in; and another young lady passed the best examination of any applicant, and was admitted to the bar as an attorney by the Supreme Court of Illinois. There are also several instances of lawyers' wives becoming lawyers, and practising in partnership with their husbands. A lady in New Hampshire was appointed justice of the peace in 1871.

Turning from law to theology, we find women as ministers of religion not infre-

quently. Their admission to the theological faculty at the universities would lead to this, and we do not hear of any peculiar difficulty in the state of public opinion respecting the adoption of this profession by women, such as we might expect at home, or indeed anywhere in Europe. In 1870 sixty-seven lady preachers recorded themselves professionally in the census.

Besides all these, we find a few isolated instances of women being employed in some of the other higher walks of life. In 1871 there was in Ohio a lady deputy-collector of the revenues, while in Cedar Rapids, Iowa, a lady was appointed chief-engineer of the fire-department, and in New Hampshire a member of the fair sex contracted to construct a section of the Valley Railroad. That America is not yet the land of perfect liberty is, however, borne out by the fact that in the profession of teaching, where women so largely outnumber men, their salaries are still for the same work considerably smaller. This points to the fact of considerable tension against them as regards other work generally, which, forcing them in this, the direction of least resistance, keeps up the time-honored custom of unequal payment. Nevertheless, Englishwomen may well congratulate their American sisters on "their lines having fallen in pleasant places" comparatively. The Englishwomen have an advantage only in this, that when they have won their cause wholly at one of the elder seats of learning, they will practically have won it throughout the country. For Great Britain, despite its hatred of centralization, has an essential unity running throughout its modes of thought and action in such matters; no one moves till there is a certain preparedness on the part of all, then the leaders move in rapid succession, and the rest follow like sheep. Whereas the world of the United States has to be conquered in little pieces, and the educational and professional facilities granted to woman are by no means on a par in all the states. Besides, any small American college can award degrees to its own students instead of submitting them to a true university test as with us, and the value of all degrees and the significance of the admission of women to them are consequently diminished. Even the conversion of Harvard would not be equal in its effects in America to those of the conversion of Cambridge or Oxford with us; and Cambridge has gone a much longer way towards conversion than Harvard has done. It is even possible that America, which was

first in recognizing women's claims, may be last in recognizing them completely. In England, while "use and wont" hold out beyond all reason, the forces of opposition behind them are being rapidly dissolved away, so that soon there will be only this crust of "use and wont;" and when, it yields, all will yield.

In California, a few years ago, a new university was opened to both sexes alike; and even so far away as the ancient capital of the Incas the new principles have found their way and their acceptance. A young lady of Cusco in 1875 applied for permission to study for the degree of doctor of laws, to which application the Peruvian minister of justice replied that the laws of the republic recognized no such difference between the sexes as would prevent the lady from being a lawyer. This answer touches the root of the whole matter; whatever difference there may be, it is not such as to justify the restrictions on human liberty and the artificial limitations of human intellect which we have made or allowed to grow up among us. It is quite beside the point to devote pages of physiological argument to proving that there is sex in mind, unless it be also proved (an arduous undertaking) that the mind-difference involved in sex-difference is such as to warrant the practical conclusions unhesitatingly and illogically deduced from the assumption of *some* difference.

While the far West was working out its solution of the problem of women's education and sphere after the fashion of a republic and a confederation, and while its example was exerting beneficial influence on the thought and intention of a certain section of the British public, eastern Europe had engaged itself on the same problem after the manner of a despotic government.

Previous empresses of Russia had interested themselves in the education of the girls of the nobility, and the schools they established for these girls became models for the voluntary efforts of the bourgeoisie. The present empress, however, proposed to herself a larger scheme, and in 1855 instituted a grand system of *Gymnasien* for girls of all classes, formed on carefully studied models taken from Germany and Switzerland. In a surprisingly short time, 186 establishments with 23,400 pupils were opened; and to these others have since been added, so rapidly did the demand exceed even this suddenly large supply. For such a work, State aid was indispensable; and there was the less difficulty about this, as the chief funds were derived

from the liberality of a former empress, Marie Feodorovna, widow of Paul I., who had left a large fortune for the education of girls. The curriculum of the new schools comprised Russian language and literature, French, German, geography, arithmetic, geometry, algebra, elementary physics and natural history, pædogy, dancing, singing, and drawing. This was not the curriculum of our girls' schools twenty years ago, and most of us can only add Latin to it now. But to appreciate rightly the significance of this organized system of girls' schools in Russia, we must remember that it is not so long ago since the education of boys was also generally neglected in that country. Secondary educational provision has been made for both sexes almost simultaneously.

Certainly there were currents of opinion adverse to this education of women beyond their sphere in Russia twenty years ago, as there were difficulties in *noblesse* minds regarding the school association of the daughters of nobles and carpenters. But the new schools made answer to all these by distinctly announcing as principle of their action that — a woman is not necessarily and exclusively wife, mother, mistress of a house: before specializing her for any particular destination, it is necessary to give all the development possible to all her moral and intellectual faculties. As for the social difficulty, the gymnasiums very often had princesses for inspectrices and were under imperial patronage; the education was good, and the nobles were soon glad to avail themselves of it.

Educate a woman and she will immediately ask for something to do. The first pupils of the gymnasiums found this something in teaching. After a time passed in the Institution of Pædogy — another product of this educational movement — many young women became teachers in the gymnasiums where they had been pupils. Thus the teaching gradually passed more and more into the hands of women, though the still existing want of a higher education necessitated the aid of men in the upper classes. Then the women became too many, and salaries were very low. Now, whatever theories theorizers may hold as to suitable feminine occupation, it is certain, as matter of experience in all countries hitherto, that women have always regarded the healing art as next in desirableness to education as a professional occupation. In Russia, however, there existed, and exists, among the tribes of Asia, and in the country dis-

tricts generally, a special demand for medical women of some degree of professional knowledge and skill. Probably this was the reason, so far as it was not the absence of a reason to the contrary, why women were, as a matter of course, admitted to study medicine in the Russian schools, though not to receive degrees. But the number of these students increased, and their position in all likelihood raised itself by the influx of some of the cultivated Russian ladies from the gymnasiums.

The increase of numbers, and perhaps the possibility that these more cultivated women might make a demand for further privileges, must have excited apprehension; for suddenly the permission to study in the schools of medicine was withdrawn by government.

One Russian student, Miss Suslova, nothing daunted, went to Switzerland, and by much tact and patience won her way at Zurich, and was admitted into the university in 1864, her admission being speedily followed by that of another Russian lady. The number of lady students of all nationalities grew in this one university admitting them. In 1871 there were four students of philosophy and fifteen of medicine, and during the next year this fifteen grew to sixty-three. But in 1873 the numbers rose to eighty-eight of medicine, twenty-five of philosophy, and one of social science. Out of this total of one hundred and fourteen, one hundred were Russians, a fact explained by the educational facilities afforded to women in Russia, which we have roughly attempted to sketch. University education is an empty show without the supply of a secondary education high enough to lead to it, and without a public opinion recognizing its value; and so among all these students there were but few Swiss, for in Switzerland the notion of women's education being limited by her sphere, and her sphere by masculine will and convenience, decidedly prevails. Yet with what comparative ease were universities opened to women in Switzerland! Can it be that the liberality of men in extending their educational privileges to women is inversely proportional to the eagerness with which women of their own country desire them? We hope not; and, at any rate, granting them is a likely way of causing them to be desired. There is at present in Zurich a Swiss lady, Dr. Marie Heim Vögtlem, who began her studies at the university in 1868, and is practising with much success. We believe it was

thought at first by many Swiss that women physicians would never prosper in Switzerland.

In 1873 a Russian ukase was published, ordering the Russian women to give up their studies at Zurich, under pain of being disqualified, on their return to Russia, for admission to any examination, educational establishment, or appointment of any kind under the control of the government. The most important reason assigned for this step was to the effect that Zurich had become a centre of Russian revolutionary societies, in which the students were involved, some of them going "two or three times in the year to Russia and back again, taking with them incendiary letters and proclamations." The ukase also stated that those young women who really desired a scientific education had ample opportunities afforded to them in Russia, where the medical schools were then ready to admit them, and other educational facilities had been opened up.

The majority of the students obeyed the order of their government and returned to Russia; twelve remained in Zurich, thereby abandoning any intention of returning; and twenty-one applied to the authorities of Berne University for admission there. Without much difficulty this was granted, and in the session of 1874-75 there were thirty-two lady students at Berne—twenty-eight of medicine, three of philosophy, one of law.

By this time women were also admitted to the Polytechnic School at Berne, the Polytechnicum at Zurich, and to the Concordat examinations, enabling them to practise in the cantons.

Geneva University has followed the example which Zurich set to Europe. This has placed the French Swiss on a level with their German-speaking sisters, as compared with whom they were at a disadvantage before. At present there are two ladies studying medicine at Geneva.

The numbers at Zurich are now reduced to about six, but at Berne there is a larger number. This falling off is, of course, at once explained by the opening of universities elsewhere, and especially in Paris, which has naturally become the chief centre of medical instruction for women.

As regards the intellectual capacity of women for the advantages granted to them, professors at Zurich and Berne have spoken as professors of Michigan and Boston spoke. They, too, have not found the minds of the weaker sex a drag on those of the stronger. Up to the present, fourteen women have graduated at

Zurich; and if this seems a small number, we would remind our readers that a great many of the Russian students did not all along intend to complete the course, and, therefore, according to that intention, stopped short of the degree.

The first of the Zurich students, having obtained her degree, returned to St. Petersburg, and presented herself for the state medical examination, which it is necessary to pass for admission to practise in Russia, and as a foreign physician she was admitted and passed. Then, after spending some time at the hospitals of Prague and Vienna, she established herself in the Russian metropolis, and is now in very successful practice.

Meanwhile the events in Switzerland had made it evident that Russian women were thoroughly in earnest about obtaining entry for themselves into the medical profession, and in 1872 an imperial decree gave them admission, under certain conditions, to the Russian schools. Classes for women were formed at the Medical Academy in St. Petersburg, during November of that year. The professors and lecturers were the same as for the young men; but the requirements for examination were different, and the diploma granted was called a diploma for the diseases of women and children. Though required to attend the lectures on legal and forensic medicine, they were not examined upon these subjects, or, strange to say, upon nervous diseases, but were supposed to go more thoroughly into the special diseases for which they received their diploma; also the course prescribed for them was reduced to four years instead of the usual five.

Energetic attempts were at the same time being made to obtain a higher general education for women, in addition to the good secondary education which they already had. In 1869 a system of university lectures for women was organized in St. Petersburg; and in 1873 a college for women was opened at Moscow in connection with the university there, the first professors of the university being engaged to teach the classes. And here we may mention, as an interesting fact, and illustrative of the close connection in the public mind of the imperial family and education, that the Russian municipalities, as a mode of complimenting the daughter of the czar on her marriage, made a number of educational donations, and founded exhibitions for students quite remarkable in liberality. All the gifts were not to girls, but the girls had, it seems, the larger

share. Meanwhile the friends of girls' education in England hope to get something in time out of ancient, misapplied, or possible future endowments, and the same class of people in Ireland petition for some of the Irish Church spoils, and the higher education of British girls has struggled into its present hopeful condition by dint of private effort and good-will.

Turning now to France, we find, on the one hand, universities granting instruction and degrees to women; on the other, a separation of the education of boys and girls surpassing even England ten years ago. The education of boys is wholly under government control, and is much more in accordance with the modern spirit, and, for the generality of students, very much better as a whole than in England. But for girls there is no system of schools organized by government, and only a few municipal schools, leaving the chief work of secondary education to be done in the convents, or by the private enterprise of those who object to the convents. When a government is so paternal as to look after the boys, it seems hard that the fate of the girls should be left to chance. This is not all, however. To protect the youth of France from quack education, every teacher is required to pass an examination and receive a certificate of his efficiency. But nuns are not required to pass examinations, and nuns are allowed to teach young girls, and have been their chief teachers hitherto. The State, so careful of half its children, neither provides for nor protects from imposition the other half. Thus, while the boys are trained to scientific thought, the minds of the girls are steeped passively in superstition, and a little surface smattering is held as the feminine counterpart of solid knowledge; after which the men of France, like men elsewhere, wonder that women are so incapable of reasoning.

We cannot do better than quote M. Léon Richer's description in "*La Femme Libre*," of the accepted model of a girl's education:—

The studies pursued in boarding-schools are what we might expect them to be, that is to say, very superficial. Grammar, arithmetic, geography, history—in particular sacred history—a little botany, and a little astronomy (one is reminded of the well-known use of the globes), form their basis; to this certain social accomplishments are superadded.

But great would be the reluctance to teach the dead languages there, to teach mathematics, geometry, chemistry, physics, philosophy,—above all philosophy! In short, any kind

of learning which widens our horizon and develops our intellect—any kind of discipline which teaches us to reason.

Men have lyceums, women have convents; men have public lectures on law, on literature, on history, on physiology, on anatomy, and medicine. . . . Have women an equivalent for these things? No.

This description might have been written of a section of girls' education in England twelve years ago, but it could not have been written in the year 1877. There may be schools not unlike the French convent, though scarcely so inaccessible to new ideas, in England now; but these exist as a heritage from the past, and are rapidly being either improved or eliminated. The death-warrant of every one of the non-repentant among them is already signed, and beside them the schools of the modern type grow up and flourish not less in numbers than in scholarship. If we ask whether girls in England have the equivalent of boys' schools, we must answer, for a section of the community, certainly yes. In England, too, the education of girls has not a more distinctly theological cast than that of boys, the reverse of which makes the state of things in France so peculiarly mischievous and so peculiarly difficult to cure. Attempts are being made to cure it, however. The education of girls, if not under the guardianship of the State, is not under its control either, and it only remains for private enterprise to take up the matter, as in England, and by successful experimenting convert public opinion from the convent ideal of the past. Schools of a better class are being established in this way, and it may be hoped that the movement from above in the universities will go far towards encouraging this movement from below. We have much faith in French accessibility to new ideas, and French directness in giving them effect, as illustrated by French action respecting the universities.

The first attempt to gain an entrance into these universities was made by Mlle. Daubré at Lyons so long ago as 1861. Mlle. Daubré presented herself before the Faculty of Letters, and after causing much astonishment, and the creation of some difficulty, was allowed to pass her examinations. Then she claimed her diploma, which, on reference to the minister of public instruction, was refused. Mlle. Daubré told her story to M. Arles-Dufour, who set off for Paris the same night, and returned after three days with the diploma in his pocket. Thus the precedent was

made ; another lady followed in 1869, and she has had her successors. Meanwhile Montpellier also granted a degree in arts to a lady in 1865.

There were in France during the early part of the century women distinguished in medicine. One, Madame Boivin, who died in 1841, was a member of the medical societies of Paris, Bordeaux, Berlin, Brussels, and Bruges, and as an authoritative writer on obstetrics has an European reputation. She was intrusted with the direction of the Hospice de la Maternité, and of the Maison Royale de Santé, besides other important offices. Before her was Madame Lachapelle, her teacher, who was esteemed one of the ablest teachers of midwifery during the latter part of the last century. She died in 1821.

These women, having made their way to the first rank of their profession, were honored as exceptions rather than regarded as precedents. But some time between 1860 and 1870 Miss Mary Putnam obtained the permission of the minister of education to study in the Paris School of Medicine. Mrs. Garrett Anderson followed her, and obtained her degree in 1870 with congratulations from her examiners on her success. Miss Putnam, who had been taking time for original researches during her studies, graduated in August 1871 with much honor. Paris soon became the centre for medical women, and in 1874 there were twenty students in the Ecole de Médecine. Every one of these, however, had, as every woman must have now, a special permission from the minister. Not long ago, also, a young American lady succeeded in obtaining the degree of bachelor of arts from the "Faculté de Science de Paris," the first to avail herself of the other than medical privileges of that university so far. And just at present one lady, a Russian, is studying in the schools of law.

At the end of last year, 1876-77, there were twenty-two women entered as students in the Medical Faculty — five French, six English, eleven Russians. During that year five women received the degree of M.D. — two English, two Russians, one German. There are now fourteen Englishwomen studying medicine in Paris. We see from these facts that it is quite as much, or rather more, in her character as one of the capitals of the world than in that of capital of France that Paris has undertaken to supply the demand of women for a medical education. In Paris, as in Switzerland, it was the request of a foreigner that opened the university to

women, and in Paris, as in Switzerland, it is to foreigners still the greatest boon.

The education of German girls may be good, but the education of German boys is a great deal better. German girls are educated to be German women ; and German women are destined, if not by nature, at least by man, to domesticity of the narrowest type. The party who take exception to this narrowing down of human thought and life — for such a party does exist in Germany — distinctly look to England for light, and covet the action of the English universities with respect to the secondary education of girls.

Germany has an organized system of *Gymnasien* and *Realschulen* for boys under the control of the State, a system which supplies, it may be said without fear of contradiction, the best secondary education in the world. For girls, government has furnished no equivalent. Private effort has done something to supply the want, and of late years *höhere Töchter Schulen*, not recognized as part of the State system, have been established. The undefined position of these schools led to a general conference of their directors and teachers in September 1872 ; and from the resolutions of this conference we learn several facts : —

1. That the object of the higher girls' schools is to impart intellectual culture to the rising generation of girls, and to occupy for them the place supplied for boys by the *Gymnasium* and the *Realschule*, and that its future development consists *not in a direct imitation of these institutions, but in such organization as is adapted to the vocation of women* : that technical training is therefore to be avoided.

2. That it aims at the harmonious development of the intellect, mind, and will, in accordance with the principles of art, morality, and religion.

3. That the same elementary teaching be given as in elementary schools, such teaching to serve as a basis for further training in general knowledge ; and in two foreign languages.

4. That the schools admit pupils from the ages of six to sixteen ; the school course to be divided into three sections and to cover ten years.

5. That the staff of teachers consist of a director and masters with university degrees ; also experienced elementary masters and certificated mistresses.

6. That the State, in acknowledgment of the fact that the higher girls' school shall be a public institution under the immediate control of the municipal author-

ities, should endeavor to promote its establishment whenever needed, and admit it to the same State jurisdiction as the *Realschule* and the *Gymnasium*, and that the masters and mistresses should enjoy the same privileges as the teachers in those schools.

We see, then, that the scheme of the higher girls' schools in Germany does not rise above the notion that there is in the feminine mind and the feminine vocation some peculiar reason for ending the years of education at sixteen, and excluding classics, mathematics, and science generally from its programme. We see, also, that it is thought desirable to place this peculiarly feminine work almost wholly in the hands of men, for the certificated mistresses rarely hold positions beyond the fourth class. The fairness of this was discussed at the Woman's Union Conference at Eisenach the same year, but without arriving at a satisfactory conclusion. If girls' education is to be so limited, however, it is not surprising that there should be hesitation to place much control over it in the women who are themselves products of this limited education.

These schools certainly do not seem to us to supply the equivalent of the *Gymnasium* and the *Realschule*, and so think some Germans also. Hence, within the last seven years, attempts have been made in Berlin, Darmstadt, Bremen, and other cities, to give opportunities for further culture to girls above sixteen, by means of courses of lectures somewhat similar to those in England. And at the Women's Union Conference also, in the year 1872, a paper was read by Dr. Wendt on a proposal for the institution of a parthegogium, or real gymnasium, for girls, in which they should receive the same intellectual training as is given to boys. The conference expressed interest in the scheme, and no doubt the idea will work and bear fruit in time; but opinion in Germany is hardly ready yet for the actual levelling of the time-honored barriers that separate mind male from mind female. Dr. Wiese, in his "German Letters on English Education," devotes a few pages, not very much to the purpose, to this novel American gospel of education for women, concluding by the statement that the thing is wholly un-German, and therefore, we suppose he means, to be disliked.

But notwithstanding all this, there have been women in Germany who contrived to "step out of their sphere," and receive, instead of condemnation, university degrees. Early in the century there was a

Frau von Siebold who distinguished herself so much in the practice of midwifery, that the University of Giessen bestowed on her the degree of M.D. Frau von Siebold had a daughter, Marianne, afterwards Frau von Heidenseich, who studied at the universities of Giessen and Göttingen, and took her degree regularly in 1817. She died only in 1859, and was much esteemed as one of the first authorities in her special branch of science.

We suppose that these ladies, like their French contemporaries, were regarded and admired as quite exceptional, for we find no chain of successors such as would rapidly spring up to-day. The next instance known to us of a degree being granted to a woman in Germany is that of a young Russian lady who had for a long time been attending lectures in law at Leipzig, and graduated there in the early part of 1874. She was not long alone in her studies, however, for at the time of her graduation there were several other women attending lectures in medicine, natural science, and jurisprudence. We believe, however, they were not German women. Later in the same year one of these, a young Jewish lady, received the degree of doctor of philosophy; and Göttingen University also conferred a degree of doctor of philosophy and magister of liberal arts on another young lady, Miss Kowalewsky. Leipzig is the largest university in Germany, and contains about three hundred students. Women are fortunate in having the right of admission within its walls, and the privilege of graduation from it. We hope they will soon be able to bridge over the gulf of secondary education which at present yawns between them and it; but in Germany, where the habit of depending on the State in such matters has been formed, and the wealth of individuals is comparatively inconsiderable, this is not so easy unless the State steps in; and to convert the State is a difficult undertaking.

In Italy we find a low though improving state of secondary education, and universities that in truth were never closed to women. We cannot wonder at the first of these facts, seeing that Italy is still so fresh from the days of her regeneration, while we must greatly admire the disposition at all times implied in the second.

And Italy has not tarried long in regenerating the education, and consequently the general position, of her women. Previously to the year 1861 there was no State-recognized secondary education for girls at all, except that given in the nor-

mal training-schools for teachers. The sexes were on a perfectly equal footing as regarded these and the elementary schools; and girls, not intending to be teachers, frequently entered the normal schools only because there was no other way of continuing their education. This was not a very convenient way, because, while the elementary course was complete at twelve years of age, the normal school did not begin till fifteen. For those who chose them, there were, of course, the convent schools, which even now outnumber all the others; but these are a negative quantity as regards true enlightenment, though happily obliged, since 1866, under penalty of dissolution, to employ only teachers having the government diploma—a great improvement on things in France. There were also some institutions inherited from ex-governments not differing much in spirit from the convent schools, and six government colleges, one at Milan, Florence, Palermo, and Verona respectively, and two at Naples, with a course now somewhat similar to that of the new schools. These were and are boarding-schools.

Thus, while it was possible for the poorest boy, from twelve to eighteen years old, to make his way from the elementary school to the university through the gymnasium, and for young men from eighteen to twenty-one to pass through the lyceum, for the girls there were only the elementary schools, and, perhaps, the convents. Frankly recognizing as wrong this inequality, the municipality of Milan in 1861 determined to establish a higher school for girls. The report of its scholastic council states the resolution thus:—

In your work . . . there has been till now a serious deficiency which must be supplied. While, in fact, the instruction for males has a graduated course, that for females is cut short at the elementary course. The law has entirely forgotten that branch of secondary schools, as if women were entitled only to a superficial and most elementary instruction, and as if it were not rather of great moment to educate the intellect of those who are to be the earliest teachers of men. It is, therefore, the duty of the municipality to give to women also that amount of average instruction which none but those occupied in the humblest manual labor should be without.

The municipality accepted this view of its duty; the project was realized, and no expense was spared to render the new school efficient. In 1864 Turin followed the good example, and then the government, appreciating the importance of the

movement, promised large subsidies to all cities that should do likewise. So now in Asti, Genoa, Venice, Padua, Bologna, Florence, and last of all in Rome also, schools of the same kind have been organized. The Roman school was opened only in January 1874. They are all public day-schools, somewhat similar in scope and organization to the endowed girls' schools and the new high schools of the Girls' Public Day Schools Company in England.

The curriculum is divided into a lower and higher course. The lower, besides the ordinary branches of school instruction, includes the outlines of natural science, domestic economy, and hygiene, geometry, and drawing. The higher course . . . adds the elements of moral philosophy and social economy, the history of Italian literature, foreign literatures, political geography, the history of the Middle Ages and modern times, the elements of physical geography, natural history, physics, and chemistry. Optional subjects, without extra fee, are French, English, and German, gymnastics, choral singing, and needlework; with extra fee, landscape and figure drawing, and instrumental music.

Considering the state of things which it followed, this curriculum promises well for the full intellectual recognition of Italian women, when time enough shall have been given for the new ideas to grow and give birth to higher ones. The chief fault that may be found with these municipal schools is the limitation of the learning age to sixteen, but the stimulus given to the education of girls by the opening of the universities to women will probably lead to some arrangement by which the time and the studies may be extended, at least for some of the pupils.

This limitation of age reminds us of Germany, but in the matter of State recognition the Italian municipal schools are very much better off than the German higher girls' schools. The whole course of instruction is drawn up by the scholastic council of the municipality or of the State, according to circumstances; and the schools are placed under the same official inspection, and their yearly examinations are conducted by the same public authorities as those of the gymnasiums and lyceums. Indeed, the interest shown throughout by successive ministers of public instruction in improving the education of girls has been most encouraging, and has considerably smoothed the path to knowledge of women in regenerated Italy.

As regards the higher education, a society for its promotion was formed at Rome

in connection with the high school there on its establishment, and courses of lectures were accordingly given to ladies by the professors of the university. Some classes with a similar object were, about the same time, formed at Genoa. But these attempts were not long left, any more than the attempt to obtain secondary education was left, without aid and recognition from above. In 1876 a State decree formally opened to women the fifteen universities of Italy. Actually they were not closed before to those earnestly desirous of using them, and many exceptional women had used them in the past; but neither were they actually open in the sense of women having an equal right in them with men. In the year that the universities were opened a lady received a medical degree at Pisa, and two others are thought likely to distinguish themselves in the Faculty of Arts, one at Bologna and one at Turin.

The higher education of women is now as completely provided for as the higher education of men; but the secondary education of the fairer sex still needs improvement in order to render it equal to the secondary education of boys. This distinct uplifting of a university goal must, however, accelerate immensely the efforts to improve this education. Last year a movement was set on foot in Florence to provide for girls the same means of pursuing the studies preparatory to admission into the university which the State supplies by gymnasiums and lyceums for boys. We quote from the circular issued by the promoters of this excellent design:

All those who have favored and promoted a higher education and instruction for women must rejoice that, whenever a larger field of education and instruction has been opened to them, Italian women of all classes have eagerly and confidently pressed into it. And the facts have corresponded to the hopes entertained, for each year a goodly number of excellently instructed pupils have issued from all the schools opened up to this time for the instruction of women. These admirable results convinced many of the possibility and expediency of imparting to women a larger and more solid culture than they had hitherto received; and, inspired by this conception, the Bonglic Regulations admitted them to the universities of the State, to pass through the course of studies required for the laureate,* and for matriculation in any of the faculties there taught. But, to arrive at the university, it is necessary to pass through the gymnasium and the lyceum; and, as yet, no gymnasiums or lyceums exist

for women in Italy. . . . In order, therefore, that the Regulations should not remain a dead letter for most girls, a gymnasium first and then a lyceum should be opened for them, where they could go through the studies necessary for admission to the university.

Accordingly, the circular announced the opening of a gymnasium in Florence the following November, provided that twenty-five pupils were secured; and further, that on the application of ten families a lyceum should be opened in addition to the gymnasium. It was proposed that the necessary funds should be raised by shares.

But the history of the education of girls in Italy has not hitherto, as we have seen, been that of a painful struggle, against adverse circumstances, into existence; and now a law to establish gymnasiums for girls is under discussion, and will, no doubt, soon be passed. When this law is passed, the schools will be gradually established all over the country, and Italy may probably be the first of all civilized nations to obtain a completely organized system of education, from the elementary school to the university, perfectly fair to all classes and to both sexes alike. This would well befit the land on which the first rays of the Renaissance fell.

Mention has already been made of the consideration at all times shown to women by the Italian universities. No other country can boast so many early manifestations of liberality or gallantry, whichever it was; and pre-eminent among Italian universities stands Bologna. So long ago as 1209, the degree of doctor of laws was conferred on a lady whose name was Betisia Gozzadini; and other instances not quite so early occurred at Padua, Milan, Pavia, and elsewhere; * while at Bologna, in 1380, there was Maddalena Buonsignori, professor of laws. The last century is rich in distinguished Italian women at the universities. At Bologna, in 1733, Laura Bassi was professor of philosophy, Maria Gaetana Agnesi, professor of mathematics in 1750; and Clothilde Tambroni, professor of Greek in 1794. Then, about the middle of the century, there was an Anna Marandi Mazzolini, whose husband held the chair of anatomy. It happened that he fell ill, and she, being a loving wife, sought to supply him the place of his enfeebled powers. So she became an anatomist, and presently delivered his lectures for him from behind a curtain. She be-

* Doctorate.

* Medicine as a Profession for Women, by Sophia Jex Blake.

came famous, and was offered a chair at Milan, which, however, she refused, and remained at Bologna till her death in 1774. Her anatomical models in wax are the pride of the Anatomical Museum at Bologna. During the next half-century several other women followed in her footsteps, of whom the most distinguished was Maria delle Donne, who received her degree at Bologna in 1806, and was afterwards appointed by Napoleon Bonaparte to the chair of midwifery in that university.

This will suffice to show what kind of spirit the advocates of the intellectual rights of women had to encounter in Italian universities, and agrees well with the readiness evinced by the State and the secular authorities in general to aid the new movement when it reached the Italian shores. Another story might be told of priestly opposition and adverse influence, but that was to have been expected.

In Austria, there exists at present a considerable movement for improving the education of girls, and in 1873 a powerful society was constituted, originating, we believe, in Gratz, with a view to found schools, and spread the principles which it adopted by organizing branch societies throughout the country. It was announced that the first object of the society was to save women from the pernicious influence of the prejudices and superstitions generally propounded under the guise of education; and the programme of studies in the new schools was to include the German language, history, modern literature, and the natural sciences. As a scheme of superior instruction, this does not so very much impress us, and we fear the previous state of things which it reveals was indeed sad; but the upward tendency at all is a great thing, and in its time is sure to have its full effect. A new lyceum was shortly afterwards opened at Gratz. Before this time, however, the University of Vienna had stamped the new movement with approval by admitting women to degrees and as students in its classes where the professors do not object. This was in March 1870. In 1873, there were four ladies as medical students, one of whom took the prize for an essay on "Operative Course in Surgery," and was pronounced by the professor to be one of the best operators in the class.

In Austria, therefore, as almost everywhere else, the professional difficulties of women are fairly solved, and the higher education is placed within their reach. It

remains to make them generally capable of reaching it, by completing the reconstruction, already begun, of their secondary education.

In Holland, a State decree opened the examination of apothecaries to women in 1870. The universities have followed in due course; and in 1873 the first lady medical student in the Netherlands, Mile. Jacobs, passed her examinations in physics and mathematics at the University of Gröningen. The cordon of university education has therefore been broken through in Holland also. Our nearest, and, as we are apt to suppose, slower-thinking blood-relations have actually surpassed us in celerity. With regard to the secondary education, it seems that in 1874 the Netherlands possessed forty-seven higher burgher schools for boys, receiving an imperial grant of over £15,000, whereas only seven of the larger cities had a higher burgher school for girls, these seven admitting them from the twelfth to the fifteenth year. Lately, however, a ministerial order has, we are told, been issued opening every gymnasium as well as every university to women, which bridges the gulf of secondary education in a very simple way.

In 1875 the University of Copenhagen opened to women all its classes and degrees except those of theology. It was expressly provided, indeed, that they should not be allowed to participate in the benefices and stipends set apart for the male students—a reservation which has an odd look of unfairness about it. Still, the admission is the chief thing, at any rate in the beginning. As regards secondary education, this also is going forward. An "association of women" at Copenhagen had been at work in promoting it for some years previous to this action of the university.

Sweden, like Italy, has for the last fifteen or sixteen years been industriously promoting the secondary education of its daughters, and during the last seven years, the privileges of the universities have been open to them. At Stockholm, a State seminary for the higher training of women teachers was founded in 1861, and a State normal school preparatory to the seminary in 1864. Courses of classes for girls giving a more advanced education than that of the ordinary schools, which in Sweden are exceptionally good, were instituted the following year; and there are now higher girls' schools similar to the normal school for girls in every large town, with the exception of those in the extreme

north, while Stockholm can boast of five and Upsala of three. These are all, however, private schools, and it has depended on individual effort to make them what they propose to be—a true preparation for university tests and studies.

In August, 1870, a State decree granted to women the right to matriculation and other examinations at the universities. The great Swedish University of Upsala throws open its doors freely, irrespective of class or sex, giving instruction gratuitously to all sorts and conditions of men and women who choose to come and take the gift. With the exception of divinity and law, women are admitted to all the examinations; and as regards the rules and customs of the university, women are exactly on the same footing as men.* Between the year 1871-73, four women passed the matriculation examination, and took their places as students in the university—two in the medical and two in the philosophical department. Even then there were two women who had passed the dentists' examination at Stockholm and were practising successfully, and three who had passed the surgeons' examination.

Before this university movement had opened up the medical profession to women, public opinion had been educated to the idea by the fact that the position and education of midwives was already better in Sweden than almost anywhere else. In 1697, a Dutch physician, Hoorn, who lived in Stockholm, proposed that some knowledge of their profession should be imparted to these women before they entered on it, and accordingly set about delivering lectures to them. After this the profession was from year to year made the subject of regulations. In 1771, the first lying-in hospital was erected, which henceforth afforded means of training to the midwives; and when in 1822 Professor Cederschiold was placed at its head, he re-organized everything, and put the lessons for female students on the same level as those for the male. All that he could do to elevate the position of the former he did, and by his representation he ultimately obtained for them the legal right of using obstetrical instruments, another month's study being required to gain the right. The possession of this qualification raises the midwife considerably, and those who have it are more regarded and better paid. Much trust is placed in them, and the physician is called upon only in

exceptional cases. There were in 1873 one hundred and forty of these women practising in Stockholm, and in all probability the number has since increased. It is evident that the existence of so large a body of efficiently instructed and thoroughly trusted women leads naturally to the idea of the lady physician, who differs from them only by her wider professional knowledge and higher general culture.

It is not unworthy of mention that in Finland also the cry of women or of men for the higher education of women has gone up and been answered. An academy for this higher education was opened at Helsingfors three years ago, starting with ninety-one ladies as pupils. The curriculum includes, among other subjects, physiology, natural science, and mathematics.

On all sides the desire for a new state of things has issued in fruition, and the days of subjected intellects and stifled or wasted activities are numbered throughout the civilized world.

England, as we know, has not been idle all this while, but her slower methods have enabled her own colonies to outstrip her in liberality. It was not enough that she should be last of all civilized nations to give even to the most exceptional women such a simple recognition of their merit as a university degree; but England proper has tarried behind her dependencies. In the year 1875 there were in Canada, as in England, several lady physicians practising; but during that year a Canadian medical license was for the first time granted to a woman by the College of Physicians and Surgeons in Ontario.

Canada borders on the United States; but India is only subject in this matter to the ordinary influences of common sense, justice, and practical expediency. The great desirability of women physicians has been evident in India for some time past, and in 1875 the Madras Medical College was opened to women, a limited course of study being allowed, with a certificate of the degree of proficiency obtained, to those who did not desire to take the whole course and study for a degree. The ladies attend the courses of lectures with students of the opposite sex, except for some few lectures which it is thought more desirable to be delivered separately. This is a practical way of solving that mountain-of-a-molehill difficulty, medical co-education. It is so easy to make satisfactory practical arrangements when once the importance of giving women medical education at all is perceived.

* See an article in *Macmillan's Magazine*, October 1877, by Professor Thorden.

Australia had taken up the education question with some vigor meanwhile, and in 1872 girls were admitted to the matriculation examinations at Melbourne University. Two young ladies presented themselves that year and passed. The numbers rose soon, and in December 1873 the successful girl candidates were nineteen in number, while at the previous examination the only two of all the candidates who passed in the first class were girls. Matriculation was not, however, allowed, though the senate had more than once urged upon the council the desirability of not keeping up the anomalous custom which prevails in England of granting a test without granting the usually accompanying privilege.

But to New Zealand University the real honor belongs of having been the first throughout the British Empire to admit a woman to its degrees. On July 31, 1877, the degree of bachelor of arts was conferred on Miss Edgar, a student of the Auckland college and grammar school.

In England the rapid forward movement of the education of girls cannot be dated much before the extension of the Cambridge local examinations to them. After a trial of this extension in 1863, it came formally into effect two years later. The College of Preceptors had, however, in the earlier days of 1860, admitted candidates from girls' schools to its examinations, and improvement up to a certain point must have been going on for some time previously to make the demand for these privileges as eager as it was. But without some such external aid, in presence of the general confusion of ideas on the subject, and the non-existence of any true models in the boys' schools, for the improvement of which these examinations had been organized, the tendency to improve could not have been so widely carried into effect. The peculiarity of English education is its entire irresponsibility: however ignorant the schoolmaster and the public may be, the State does not protect the latter from the former. Now this protective function, which the State fulfils in other countries, the universities have been trying to fulfil for us by local examinations; and whether constant external examining is in itself good or bad, it is quite certain to be better than absolute anarchy.

To the girls' schools the introduction of this regulative principle was the greater benefit, seeing that schoolmistresses had no university or equivalent traditions of their own to guide them, and seeing that the education of girls was so much lower,

both actually and ideally, than that of boys. It was something that schoolmistresses who had perhaps scarcely heard of such a thing as mathematics should become acquainted, through university regulations, with that science or group of sciences as something to be taught. Slowly but surely new notions of a curriculum and a higher standard within it have filtered into the many obscure nooks and crannies of the female educational world. Year by year the number of girl candidates has swollen, and the quality of their work has improved.

Cambridge having led the way in giving this important helping hand both to those who wanted help and those who wanted light, Oxford followed in 1869, four years later, during which year also the London University and the Cambridge higher local examinations for women were instituted. Oxford has now its higher local scheme also, and a joint-board examination of the two elder universities has been organized within the last few years and extended to girls. Edinburgh was as early as 1865 in instituting its local examinations, and the two Irish universities looked on for five years, and began respectively their examinations for girls and women in 1870. And last year St. Andrew's University announced itself ready to grant a higher certificate to women, the standard of attainment being the same as that required for the M.A. degree. It has since been decided that the successful candidates are to be allowed to adorn themselves with the title of literate of arts (L.A.). How dearly does the British mind love to keep up distinctions of sex in matters to which sex is quite irrelevant! So far as we know, degree certificates and equivalent titles are wholly indigenous to British soil.

So much for the action of the universities in promoting ideas of improved secondary education. On the other hand, we have the solid work done in establishing good girls' schools and other means of education. The Women's Education Union, which was founded in 1872, publishes a list of "colleges, schools, lectures, and other means of education for women and girls in the United Kingdom." From this we cite a few facts.

There are now eighteen endowed schools for girls, six of which are in London. The scheme for the first of these, the North London Collegiate and Camden Schools, founded as a private school in 1850, and now numbering between the two schools about one thousand pupils, became law in 1875. Latin is taught in

nine of these endowed schools, mathematics in ten, natural science in fifteen, political economy in five, domestic economy in fourteen, physiology in ten, Greek in one, moral philosophy in one, the usual girls' subjects holding, of course, their accustomed place.

Next we find twelve schools of the Girls' Public Day-Schools Company, the first of which was opened at Chelsea in January, 1873. The curriculum includes in the schools generally Latin, physical science, and mathematics.

Besides these, there are 26 other high schools, in 20 of which Latin and mathematics are taught, natural science in 18, political economy in 7, physiology in 4, logic in 2, and Greek in 4.

This makes a total of 56, to which we have to add the numerous private schools, many of which have adopted the new kind of curriculum, and send in their pupils for testing at the local examinations.

Then for colleges we have Girton College and Newnham Hall with their Cambridge courses; also a college at Bristol, three in London, and two in Dublin. These have the usual curriculum, including classics, natural science, and mathematics, taught up to the level of the student's previous attainments. Among them, Queen's College and Bedford College in London deserve special honor as products, and successful products, of the earliest efforts to procure for girls a higher education. Besides these, the public lectures of twenty-six professors of the University of Cambridge, and, in University College, London, the classes of jurisprudence, Roman law, political economy, geology, logic, and mental science, higher senior mathematics, and mathematical physics, are open to women. This last-mentioned class at present consists of five professors, five young men, and five young women; and at the end of the last session, 1876-77, the only young lady which the senior mathematical class could boast carried off the prize far above the heads of her male competitors; nor was this the first instance by several in which lady students had been guilty of similar unkindnesses. In addition to these mixed classes, which solve the higher education difficulty in the readiest and most economical way, we have the lectures of the Ladies' Educational Association in connection with University College and delivered by its professors, the lectures and classes of the Society for the Extension of University Teaching in London, the lectures of the Cambridge

Association for Promoting the Higher Education of Women, the lectures of the Edinburgh Ladies' Educational Association, and lectures in connection with Alexandra College by professors of Trinity College, Dublin.

For those who cannot avail themselves of any of these means of instruction, and yet desire to get rid of the inheritance of ignorance left them by their early education, a system of instruction by correspondence has been organized at Cambridge, and more lately at Edinburgh, by means of which help and guidance are extended far and wide to earnest women struggling into light. A story is told of a lady in some remote corner of Scotland, who, bitterly oppressed with the sense of her own deficiency in arithmetical knowledge, went to a schoolmaster in the neighborhood and prevailed on him to let her stand, slate in hand, in the class with his boys till the mysteries of vulgar fractions became plain. To such women the correspondence system is an inestimable boon; and it speaks well for the thoroughness of this education reform that some such means should have been devised for aiding the victims of past mistake, though we shall certainly be glad when it is no longer possible for women in remote corners of Scotland or anywhere else to find themselves so sadly in need of aid from afar. That section of the community which desires a new state of things is indeed leaving no stone unturned to bring it about, and the stir of thought in the vast mass of thoughtlessness on this subject is felt everywhere. "A little leaven leaveneth the whole lump."

The improved secondary education of girls is certainly growing steadily in England, and converting public opinion to approve of it in its growth; but much still remains to be done in widening the area of its action. The higher education is comparatively better off, by which we mean that it is about as well provided for as the state of public opinion requires. The supply is equal to the demand, and the demand has to be increased by education on the secondary plane, and by the direct encouragement of the established universities. In October 1868 the college for women was opened at Hitchin, which has since been removed to Girton, three miles from Cambridge. Meanwhile, in 1870, Newnham Hall was opened in Cambridge. Both these colleges are taught by professors from Cambridge University, and both are full. But what distinguishes

these two from all other ladies' colleges is the fact that the papers set for the previous and degree examinations at Cambridge are sent down to Girton and Newnham half an hour after they are given out in the senate-house, and the merits of the girls' answers are pronounced upon by some of the examiners, after which degree certificates are given to the successful candidates, stating in each case which class the owner would be in if she did not happen to be a woman.

There is no use in quarrelling with one's bread and butter, and Girton students are duly grateful for their degree certificates. Still, looking at the concession from a little distance, the effect is slightly ludicrous. Is it that the idea of a mere certificate has in it something of an antidote to the unsexing influence of university distinction? or has it some kind of charm to prevent the overtaking of feminine minds with masculine study? Is it necessary to devise some such expedient for keeping women in their proper place, seeing that they *will* be educated? or would it be too much for the feelings of the poor young men to place them absolutely in competition with the fairer, and, we are told, sometimes more industrious sex? But, in truth, we suppose the real cause of these curious devices may be found in the extraordinary difficulty which the English mind has in conceiving anything quite different from that to which it has always been accustomed. The English political system has grown up by a slow process of patchwork, and perhaps Teutonic islanders cannot at present, by their mental constitution, grant educational privileges to women except after a similar fashion. But we hope the patchwork is in this instance nearly complete, and that, after a very little more of the present tentative course, Girton and Newnham will be regularly affiliated to the University of Cambridge. When that is done, the demand for higher education will rise rapidly.

A proposal for an Oxford Girton has been lately talked about, and, as extending the new ideas to a slightly different section of the community, we hope it will soon be carried out, and have as much success as the sister project at Cambridge. By the affiliation of such a college, in due time Oxford too, most conservative of universities, may be induced to extend its full privileges to women.

In Ireland the movement for improving the education of girls was early taken up, but the comparative poverty of Ireland

makes the lack of endowments a very serious difficulty. In the year 1861 the Queen's Institute in Dublin was founded. This valuable society combines, with the Institute for Technical Instruction, a college for the education of women, which supplies the examinations of Dublin and the Queen's Universities with many of their best candidates. Alexandra College, modelled after Queen's College, London, was established in 1866, and has now a school in connection with it. Its classes are taught by professors from the university, within the walls of which the will to aid the higher education of women is not wanting. Last year a number of the Trinity College students called together a meeting, which was presided over by the provost, "for the purpose of expressing sympathy with Alexandra College as an institution which is proving effective in promoting the higher education of women." The spirit which this little fact reveals is so pleasant, that we have thought it worth while to state it here. We hardly think that the large number of gallant young Irishmen who attended this meeting would so particularly object to the society of young ladies in their lecture and examination halls, or even at the private lessons of an "honor grinder." Alexandra College is not the equivalent of Girton. Ireland is poor, and has much to do for the secondary education of her girls; she must provide for their higher education in the most economical way. And the most economical way is the American way, and the way of all the civilized world except in these our islands, of granting the privileges of the existing universities to daughters as well as sons. Questions of residence would be so easily arranged that they are scarcely worthy of mention. We have faith in Celtic elasticity of thought and practical capacity for leaping over obstacles, and hope that the university which first acknowledged the principle of justice between creed and creed will not delay long in administering justice between sex and sex.

But naturally the younger Irish university will be the first to do this. The Queen's University has, as a university, declared its willingness to grant medical degrees to women; but the colleges have not consented to give the appropriate education, without which the university cannot move. This is a pity, but it is hardly likely that the colleges, under such circumstances, will long harden their hearts; and certainly if they consent to give med-

ical instruction, they can have no difficulty about giving any other, which indeed they might perhaps consent to give first.

But with respect to secondary education, the want of funds stops the improvement sadly. In 1873 a memorial was presented to the government then in office from the Queen's Institute, Dublin, the Belfast Ladies Institute, and the National Union for Improving the Education of Women of all Classes, asking for a royal commission to inquire into the state of education in Ireland, including that of girls, and for the admission of girls to a fair share in the surplus revenues of the disestablished Church. This is a fair request; wherever there is money to be disposed of for educational purposes, it is only just that girls should have the benefit of some of it. And the simplest and most economical way of aiding the secondary education of both sexes is to establish mixed schools for both. Why should not some of the surplus revenues be so expended? Perhaps British mixed education on a large scale may first appear in the west. British medical diplomas have, at any rate. The College of Physicians in Dublin has gained that honor for the western island, and during the past year the ladies who obtained their education in Edinburgh have, after many trials, received their diplomas in Dublin.

The story of the ladies' attempt to gain entrance in Edinburgh, and its ultimate failure, is too well known to need more than mention here. The universities of St. Andrew's and Glasgow, one of which has just instituted, and the other is considering, a system of higher examinations for women, may now be before their sister of the metropolis in granting full educational privileges to women; but we hope that Edinburgh University will not be long in recovering the character for liberality and nationality which she has temporarily lost. The educational movement is earnest in Scotland, and as this brings Scotch women in numbers up to the level of requiring professional privileges, the leading Scotch university will no doubt turn from its suddenly perverted ways and repent. The economical advantages of mixed education in the universities is not likely to remain long unappreciated by Scotch common sense. As for the secondary education, the local examinations of the University of Edinburgh have done good work in improving it, but the want of endowments presses very hardly in Scotland as elsewhere.

Medical education for women has long been a difficulty in England—a difficulty of which, however, last year saw the solution. In 1864 the Female Medical Society was established; and in 1866 a hospital for women, with women as physicians, was opened. Between 1869 and 1874, the matter was pending in Edinburgh; but the closure of the doors of that university, which the rejection of Mr. Cowper Temple's bill in 1875 made definitely effective, caused all the chief energy of the effort to be transferred to London. In 1874, a medical school for women was organized, and an excellent staff of teachers secured. But the regulations of the examining bodies require that medical students should attend for at least two or three years at a hospital which in London must contain not less than one hundred beds. This condition is fulfilled by thirteen hospitals only, and at none of these could female students gain admission; so that, even if the examining bodies had recognized the school, it was unable to comply with their requirements. Laboring under this double difficulty, matters looked dark for the Female Medical School. But the Gordian knot is now cut. The Royal Free Hospital is open to women, the Irish College of Physicians has given its diplomas, and the University of London has promised its degrees. The difficulties of medical women, it seems, are finally overcome; and not only finally but peacefully, for with a separate school wholly their own, and a purely examining university to deal with, the danger of shocking the nerves of the stronger sex ought certainly to be reduced very nearly to the vanishing point.

The question still in the balance at London University is that which bears so closely on the advance of the higher education of women, namely, their admission to equal rights and privileges with men in the matter of degrees generally. On this, our rulers in Parliament will have to decide when the new charter is applied for, and in the acceptance of that charter, if granted, convocation will have power as well as voice. We do not indeed fear that convocation, when the sacredness of its favorite medical degrees is gone, will care to preserve intact the sacredness of the others. The graduates of medicine, at least, will hardly act so as to imply that, among the manifold degrees of the University of London, this one of medicine, and it only, is within the capacity of the weaker sex; and the arts and science graduates have not such weighty profes-

social and other reasons as the medical graduates have for violent resistance to the invasion of their premises.

The programmes of the women's examinations being already assimilated to the regular university examinations, the only conceivable reason that can be assigned against the opening of these arts and science degrees is that they may and probably will act as a more powerful stimulus to mental exertion, and that in this, women being intellectually and physically less than men, lies a great evil.

We do not believe this assumption as a necessary fact; but that question need not be discussed here. What if the average woman is capable of less mental work than the average man? It still remains indisputable that many women are capable of much more than many men, and that the strong women run less risk of overtaxed brains than the weak men. There are women with nerves of iron, and men with nerves of flax: what sort of classification is that which shuts out the one from the higher goals of intellectual effort, and tempts the ambition of the other by them? Have there been cases of eager girls in England or America who marred their health by overwork? Have there never been cases of overworked young men? Have we never heard of the worn appearance of high wranglers and other prizemen,—of energies (male energies) slackened for life because of one great strain,—of Cambridge parlance about senior wranglers killing so many men who tried to keep up with them,—of brain fevers and deaths among too zealous male students,—of things that would give rise to fifty Dr. Clarkes if only they happened to girls? Are we to be told, because here and there a girl, who escapes control, has the folly and the wickedness (for it is a wickedness) to work herself into a weak state of health, that therefore the goals of a higher education must be withheld from all stronger, or cleverer, or more sensible young women also? Why do we not shut up our senate halls altogether, and forbid at once the competition of talent because it has had its sad number of young men victims? Let us be consistent, and visit the sins of the few upon the many all round or not at all.

It will be well, indeed, when one's duty to one's own physical organization is as well understood at Oxford and Cambridge as it is in the new English girls' schools. Meanwhile the universities of the British isles might consider the advisability of

passing a by-law requiring candidates for all degree examinations to undergo a medical examination as guarantee that they had not wickedly offended in the matter of overwork. But, till there is some State or university regulation to prevent the weaker of young men from working for university laurels because they may have the folly to overwork, such paternal arrangements for the weak and strong alike among women are surely very much out of place. Let those among them who can easily (an undoubted number) have their chance, and leave the common sense of English women and men to take care of the rest. Women know very well (better than men, perhaps, so much have they been scolded about it) that "there are twelve hours in the day in which men can work;" and the slower laborers must do their work, not by increasing the number of hours, but by increasing the number of days.

And the women, upon whom most depends, have shown themselves quite able as well as willing to deal satisfactorily with this question of temperance in work. In the principal girls' schools, every pupil has a home time-table on which the amount of time given to each lesson is prescribed, and the parents or guardians are responsible, as part of the school agreement, to see that this time-table is not exceeded. In one school, the largest and most important, a further guarantee has been adopted: each girl brings in every morning on a printed form an account of her home-work, signed by herself, stating when she began her lessons, when finished them, and the total time occupied, the maximum allowed to the elder girls being three hours. Long hours and late hours are thus at once detected, and every one's attention, which is perhaps the most important point, is drawn to the truth that health is a sacred trust to be guarded by this one definite measure, among others, of temperance in the expenditure of nervous force. Trained in this way, and with some knowledge of physiological laws, the young women of the future will not be likely to forget duty to their bodies in fulfilling duty to their minds.

Surely, then, there is no true reason in this health argument to justify us in holding up a lower grade of education for women than for men, or in giving up to a certain point the same standard shorn of the honors naturally accompanying it, lest the attainability of the latter should goad weak brains to mad efforts. As for femi-

pine inferiority of intellect, whether necessary, contingent, or imaginary, it does not affect this matter in the least. If the *kind* of education for which London University degrees are organized be equally suitable to girls and to boys, and if humanity can or must (surely it must) be trusted to take care of its health as a private undertaking, then the smallness or the greatness of the number of women capable of distinguishing themselves has no importance as bearing practically on what ought to be done. Let young women be tested by the same ordeal as young men, and accept the natural position in the scale of excellence to which that ordeal assigns them. Whether it will be a high place or a low place cannot be absolutely known till the experiment has been fully tried. Only it is worth while to remember that, whenever and in so far as the experiment has been tried elsewhere, women have not found themselves in the lowest rank.

But *cui bono*? we have heard it said. London University does not give instruction which is the solid good; what benefit can it do women to have the degrees which bear no professional significance?

Have the degrees of London University no general educational bearing, then? Are they not, as they profess by implication to be, an important adjunct to the higher education of boys; and would they not be just such an equally important adjunct to the higher education of girls? In fact, the attainability of these university honors would create a new demand for higher education among women, the existence of which demand is indeed the only condition at present necessary for its being supplied. The means of supply, as we have seen, are at hand, capable of development up to any required point; but a certain sufficient demand is necessary to effect this development. Now a demand for higher education depends largely, first, on good secondary education, and secondly, in the undeveloped state of English thought as to the value of education *per se*, on the existence of some goal of endeavor of sufficient effectiveness on the imagination. The satisfaction of this second need is, from an educational point of view, the *raison d'être* of the University of London, and the boon which it can confer on girls educationally. And girls need it even more than boys; for if English thought is undeveloped on the subject of education generally, much more is it embryonic as concerns the education of women.

The public mind never needed the instruction as to the value of certain ends which an examining university can give more sorely than it needs instruction on this point, and the concession of the privileges in question would be this instruction. The admission of women to the degrees in London would affect people as a sort of national resolve that the kind and degree of education thereby encouraged was to be adopted as a national end; for the action of the universities in England is, as regards general education, almost parallel to the action of the State in Continental countries. Nor would the results of this admission be limited to accustoming the public mind to, and therefore creating a demand for, the higher education of women; a high external goal would be set up as a mark of effort for the whole feminine education of the country, the tone of which throughout must inevitably be affected by the attainability of these higher privileges.

Again, it often happens that girls who learn chemistry and conic sections at school are treated as small phoenixes by their friends, these not being accustomed to the association of such subjects with girls, and foolish vanity may sometimes result. Now the elevation of the ideal fixed on as the honorable termination of an educational career will certainly have a bracing moral effect where this state of things exists. Girls *and their parents* will realize mental insignificance in the light of this their final goal of effort more than they do at present in the light of lower goals, just as now they certainly have as individuals a much truer idea of their position in the scale of intellect than in former days, when every woman had actually the right to think herself the equal of every other and of every man, just because she never had any means of knowing better. Education produces humility, especially when its subject knows distinctly that there is a higher plane of education which it may attain if it has the ability. Competition produces humility, especially when the competition is not limited to a class or to a sex. How well it would be for the friends and relations of some women if these had found themselves among the failures in early womanhood!

But there is another kind of woman, clever, well-educated, and often naturally unassuming, to whom it is a severe injustice that she should be unable to obtain that full recognition of her talent which a university degree implies. Without it she

is placed at a disadvantage with many a mental inferior who flourishes an honored title after his name: she needs, indeed, to be possessed of a fair measure of self-confidence to keep uppermost even in her own mind and act upon their relative intellectual merits; whereas any such simple fact as having taken a scholarship which he failed to take would make matters rather easier. The absence in these cases of any common measure, however imperfect, is indeed no imaginary grievance, but a real practical inconvenience where competition for an appointment occurs, and a special trial to those more yielding spirits who cannot assert, and can scarcely believe, what they have not been allowed to prove. Who knows how much the world may have lost by the non-belief in themselves of such?

One word more and we have done. The question at issue stands quite apart from that of the goodness or badness of our whole examination-regulated educational system. It may be that we are ripening towards a thorough reconstruction of this system. It is said that, as the examination test, pure and simple, is bad, we had

better not extend it. But the examination test is one means towards an end, and at least better than none. Till some other means is found this means should be extended on all sides equally, so that the education it fosters may grow up equally for boys and for girls. Then, if reconstruction does come about, it will find, and therefore make, no difference between the sexes. Meanwhile, if we believe in our present system, we must admit both halves of the nation into it. If we regard it as experimental and temporary, we must apply our experiments consistently. And that we are in a fair way to do this there can happily now be little doubt. We look forward to the day when the University of London will fulfil its function of guide and judge impartially, when Oxford and Cambridge will have colleges for women affiliated to them, and when the universities of Scotland and Ireland will have taken the simpler and more economical way of merely abolishing nouns and pronouns of gender so far as education is concerned. The nouns and pronouns of gender have their origin far too deep down in human nature for us to fear any disastrous result.